Winrock International

Participatory Approach in Assessment of Clean Energy Use in Kenya

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This Presentation is based on two projects that Winrock has been involved in in Kenya

- 1. Assessment of renewable energy technologies and energy efficient interventions with the greatest potential of bridging gaps in household, onfarm and small enterprises energy requirement
- 2. Assessment of household energy requirements and consequent interventions in peri-urban Ngong Division

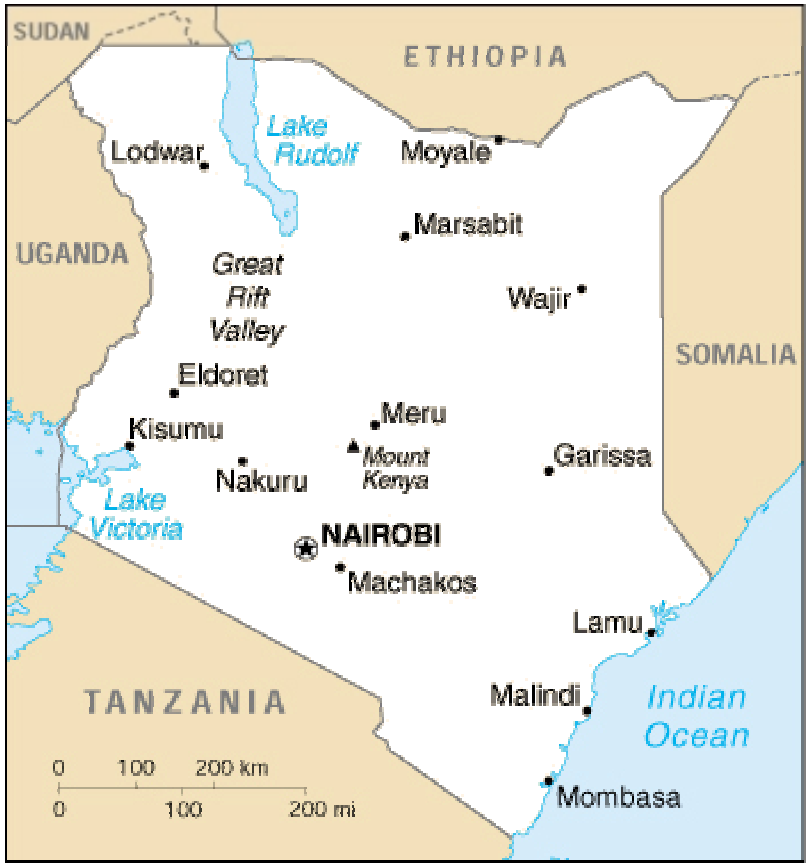
Layout

- Background to the assessment
- Location of the project
- Project objectives
- Methodology used
- Overview of the findings
- Emerging opportunities
- Concluding remark

Background

- PRA as a basis of establishing a demand driven renewable energy program in Kenya
- Assessment of household energy requirements conducted by partners of the Women's Leadership Program

Location of the Project



- Lake Region
- Rachuonyo
- Siaya
- Busia
- Bondo
- Teso

B. Eastern

- Tharaka Nithi

C. Ngong Division

Objectives

- Inventory of existing applications, forms and uses of RETs
- Characterize demands, priorities and gaps at household, farm, community and small enterprises
- Identify actors in the RET sector
- Identify opportunities for interventions
- Formulate strategies for interventions

Methodology Used

- Literature review and profiling of RETs and energy efficient interventions
- Participatory Rural Appraisals as the first line of field investigation to scope for suitable rural activities, use of RETs by both men and women
- Surveys of rural households, agriculture enterprises, fishery ventures, commercial enterprises and institutions

Overview of findings

- Household fuel use
  - Firewood - 95%
  - Kerosene - 93%
  - Charcoal - 55%
  - Dry cells - 47%

2. 50% of the 4 four “very highly important” domestic energy needs are women’s roles needs; cooking, boiling water, the other 50% both men and women; indoor lighting and radio broadcasts

- Highest institutional and enterprise
  - use of energy is in biofuels, firewood and charcoal supported by kerosene
  - highest demand is for improved stoves, next solar for heating and lighting,biogas for cooking
  - No demand for wind generators or solar for communication

4. Onfarm demands for solar electric systems for irrigation and soya and millet processing

Emerging Opportunities

- Solar Dryers
  - Preserving herbs for export by farmer groups in Tharaka Nithi
  - Dehydration of grains and root crops for relief food mixtures in Busia
- Solar water pumping horticulture in Bondo
- Improved stoves in Ngong
- Improved Fish Kilns in Bondo and Rachuonyo
- Improved brick kilns in Siaya, Busia and Rachuonyo
- Improved ceramic kilns in Teso

7. Domestic and Commercial Energy Efficiency Programs

- Home Solar lighting systems
- Solar thermal water heaters
- Improved commercial stoves
- Commercial solar systems

Pictures

- Traditional versus energy efficient kilns

Open fire fish drying

- **Improved cook stoves introduced in Ngong**

Energy Conserving "Fireless" Cooker

- Demonstration

- Making the cooker

Concluding Remarks

The participatory gender approach used in this assessment ensures that Winrock not only targets the right "client" but that the intervention is appropriate and acceptable because the client has been consulted.

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